

Serial Number: 09/900,518ACRF Processing Date: 5/31/02  
Edited by: M. SPENCER  
Verified by: \_\_\_\_\_ (STIC sta

Changed a file from non-ASCII to ASCII

Changed the margins in cases where the sequence text was "wrapped" down to the next line. #10

Edited a format error in the Current Application Data section, specifically: **ENTERED**

Edited the Current Application Data section with the actual current number. The number inputted by the applicant was  the prior application data; or  other \_\_\_\_\_

Added the mandatory heading and subheadings for "Current Application Data".

Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

Changed the spelling of a mandatory field (the headings or subheadings), specifically: \_\_\_\_\_

Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: \_\_\_\_\_

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: \_\_\_\_\_

Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

Inserted colons after headings/subheadings. Headings edited included: \_\_\_\_\_

Deleted extra, invalid, headings used by an applicant, specifically: \_\_\_\_\_

Deleted:  non-ASCII "garbage" at the beginning/end of files;  secretary initials/filename at end of file;  page numbers throughout text;  other invalid text, such as \_\_\_\_\_

Inserted mandatory headings, specifically: \_\_\_\_\_

Corrected an obvious error in the response, specifically: \_\_\_\_\_

Edited identifiers where upper case is used but lower case is required, or vice versa.

Corrected an error in the Number of Sequences field, specifically: \_\_\_\_\_

A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_

Other: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.



OIPE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/900,518A

DATE: 05/31/2002

TIME: 14:04:00

Input Set : A:\PTOMS.txt  
 Output Set: N:\CRF3\05312002\I900518A.raw

4 <110> APPLICANT: Allen, Keith D.  
 5 Zhang, Qin  
 7 <120> TITLE OF INVENTION: TRANSGENIC MICE CONTAINING CX2 GENE  
 8 DISRUPTIONS  
 10 <130> FILE REFERENCE: R-716  
 12 <140> CURRENT APPLICATION NUMBER: US 09/900,518A  
 13 <141> CURRENT FILING DATE: 2001-07-06  
 15 <150> PRIOR APPLICATION NUMBER: US 60/216,178  
 16 <151> PRIOR FILING DATE: 2000-07-06  
 18 <160> NUMBER OF SEQ ID NOS: 4  
 20 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 22 <210> SEQ ID NO: 1  
 23 <211> LENGTH: 2490  
 24 <212> TYPE: DNA  
 25 <213> ORGANISM: Mus musculus  
 27 <400> SEQUENCE: 1  
 28 aggctgtccc acccaccatc tgccaccgtc gcagcgcccc cgcccccgtc ccgcgcggta 60  
 29 gtcgtcattt gtagcccgcc tgccgtccc ggggacccga tcctaccctg ggtgcggggc 120  
 30 agagcgggca tggcccgctc ggggaccgcg tggccgtcgc tggcgctgac cctgcactt 180  
 31 gtggcggtgg ccctggctgg agtcagagcc caggcgccag cttcgagga gcctgactat 240  
 32 tacagccagg agctctggcg ggcggggcgc tattatggc atccggagcc tgagccggag 300  
 33 ccggagctct tctcgcccttc aatgcataaa gaccttaggg tggaggagca ggaacagcag 360  
 34 gagccgcacc agcaggggcca cagaactccc aagaaggcca tcaagcccaa gaaggctccc 420  
 35 aagagggaga agtttgtc agagacgcct ccaccaggta aaaatagcaa cagaaaaggc 480  
 36 agaagaagca agaatcttga gaaagctgcc agtgcatttgc atgggtgtccc tgtgctcat 540  
 37 gagatgtca gagagagttt cccaccttgc ggtctggaaa cattaaaaat cacagacttc 600  
 38 cagctgcattt cctccacatc gaagcgttat ggcctggag cccaccgggg gagactcaac 660  
 39 atccaggcag gcattaaatga aaatgacttt tacatgggg ctttgtgtgc tggtaggaac 720  
 40 gacttgcattt agtggatcga agtggatgcc cggcgccgtc ccaagttcac aggggtcatt 780  
 41 acccaaggaa ggaactctct ctggctgagt gactgggtga catcctataaa agtcatggtg 840  
 42 agcaatgaca gccacacatc gttactgtt aagaatggat ctggcgacat gatattgaa 900  
 43 ggaaaacagtg agaaggagat toctgtgtc aatgagctgc cagtcccat ggtggccgc 960  
 44 tacattcgca taaaccctca gtcctggttt gataacggga gcatctgcattt gaggatggag 1020  
 45 atcttgggct gcccactgcc ggatcctaat aactattatc accgcacgtaa tgagatgacc 1080  
 46 accacggatg acctggattt taagcaccac aactataagg aatgcgcaca gttatgtaa 1140  
 47 gttgtcaatg aaatgtgcctt caatattacc aggattaca acattggcaa aagccaccag 1200  
 48 ggccctgaaat tggatgcgtt agagatctctt gaccatcctg gggacatgaa agttgggtgag 1260  
 49 cccgagttcc actacatcgc agggggccac ggcaatgagg ttctgggacg agaactgctg 1320  
 50 ctgctgtgc tgcacttctt ctggccaggaa tactcgccgc agaacgcacg catcgccgc 1380  
 51 ttgggtggagg agactcgaat ccacattctca ccctccctca atcctgtatgg ctatgagaag 1440  
 52 gcctatgaaag gaggttccga gttggggaggc tggccctgg gacgttggac ccatgatggc 1500  
 53 atcgatatca acaacaactt tccggattt aactcgctgc tctggggaggc agaggaccag 1560  
 54 cagaatgccc caaggaaggt ccccaaccac tacattgcca tccctgagtg gtttctgtct 1620

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/900,518A

DATE: 05/31/2002  
TIME: 14:04:00

Input Set : A:\PTOMS.txt  
Output Set: N:\CRF3\05312002\I900518A.raw

55 gagaatgcca cagtggccac agagaccaga gccgtcatcg cctggatgga gaagatcccg 1680  
 56 tttgtgctgg gaggcaacct acaggggggt gagctggtcg tggcataccc ctatgacatg 1740  
 57 gtgcggtccc tgtggaagac ccaggagcac accccaacac ctgatgatca tgtgttccgc 1800  
 58 tggctggcgt attcctacgc ctccactcac cgccctcatga cagatgccag gaggcgagtg 1860  
 59 tgccacacgg aagatttca gaaggaggag ggcaccgtca atggggcttc ctggcacaca 1920  
 60 gtggctggaa gtctaaacga tttcagctac ctccatacaa actgcttga gctgtccatc 1980  
 61 tacgtggcgt gtgataaaata cccacacgag agcgagctgc cggaggaatg ggagaataac 2040  
 62 cgggagtctc tgattgtgtt catggagcag gttcatcgag gcatcaaagg catagtgaga 2100  
 63 gatttacaag ggaaagggtt ttc当地atgt gtc当地tctg tggaggtgt taaccatgac 2160  
 64 atccggacag ccagcgttgg ggattactgg cgtctactga accctggcga atatgtggtc 2220  
 65 acagccaagg cggaggctt tatcacttcc accaagaact gcatggttgg ctatgatatg 2280  
 66 ggagctactc ggtgtgactt caccctcaca aagaccaacc tggctaggat aagagaaatt 2340  
 67 atggagacat ttgggaagca gcctgtcagc ctaccctcca ggccctgaa gctgcgggga 2400  
 68 cggaaaaggc ggcagcgtgg gtgaccctgt cggacacttg agacataccc cagaccgtgc 2460  
 69 aaataaaaaat ccactccagt agtaaaaaaa 2490  
 71 <210> SEQ ID NO: 2  
 72 <211> LENGTH: 764  
 73 <212> TYPE: PRT  
 74 <213> ORGANISM: Mus musculus  
 76 <400> SEQUENCE: 2  
 77 Met Ala Arg Leu Gly Thr Ala Cys Pro Ala Leu Ala Leu Ala Leu Ala  
 78 1 5 10 15  
 79 Leu Val Ala Val Ala Leu Ala Gly Val Arg Ala Gln Gly Ala Ala Phe  
 80 20 25 30  
 81 Glu Glu Pro Asp Tyr Tyr Ser Gln Glu Leu Trp Arg Arg Gly Arg Tyr  
 82 35 40 45  
 83 Tyr Gly His Pro Glu Pro Glu Pro Glu Leu Phe Ser Pro Ser  
 84 50 55 60  
 85 Met His Glu Asp Leu Arg Val Glu Glu Gln Glu Gln Gln Glu Pro His  
 86 65 70 75 80  
 87 Gln Gln Gly His Arg Thr Pro Lys Lys Ala Ile Lys Pro Lys Lys Ala  
 88 85 90 95  
 89 Pro Lys Arg Glu Lys Leu Val Ala Glu Thr Pro Pro Pro Gly Lys Asn  
 90 100 105 110  
 91 Ser Asn Arg Lys Gly Arg Arg Ser Lys Asn Leu Glu Lys Ala Ala Ser  
 92 115 120 125  
 93 Asp Asp His Gly Val Pro Val Ala His Glu Asp Val Arg Glu Ser Cys  
 94 130 135 140  
 95 Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln Leu His  
 96 145 150 155 160  
 97 Ala Ser Thr Ser Lys Arg Tyr Gly Leu Gly Ala His Arg Gly Arg Leu  
 98 165 170 175  
 99 Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr Asp Gly Ala Trp  
 100 180 185 190  
 101 Cys Ala Gly Arg Asn Asp Leu His Gln Trp Ile Glu Val Asp Ala Arg  
 102 195 200 205  
 103 Arg Leu Thr Lys Phe Thr Gly Val Ile Thr Gln Gly Arg Asn Ser Leu  
 104 210 215 220  
 105 Trp Leu Ser Asp Trp Val Thr Ser Tyr Lys Val Met Val Ser Asn Asp

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/900,518A

DATE: 05/31/2002  
TIME: 14:04:00

Input Set : A:\PTOMS.txt  
Output Set: N:\CRF3\05312002\I900518A.raw

106	225	230	235	240
107	Ser His Thr Trp Val Thr Val Lys Asn Gly Ser Gly Asp Met Ile Phe			
108	245	250	255	
109	Glu Gly Asn Ser Glu Lys Glu Ile Pro Val Leu Asn Glu Leu Pro Val			
110	260	265	270	
111	Pro Met Val Ala Arg Tyr Ile Arg Ile Asn Pro Gln Ser Trp Phe Asp			
112	275	280	285	
113	Asn Gly Ser Ile Cys Met Arg Met Glu Ile Leu Gly Cys Pro Leu Pro			
114	290	295	300	
115	Asp Pro Asn Asn Tyr Tyr His Arg Arg Asn Glu Met Thr Thr Thr Asp			
116	305	310	315	320
117	Asp Leu Asp Phe Lys His His Asn Tyr Lys Glu Met Arg Gln Leu Met			
118	325	330	335	
119	Lys Val Val Asn Glu Met Cys Pro Asn Ile Thr Arg Ile Tyr Asn Ile			
120	340	345	350	
121	Gly Lys Ser His Gln Gly Leu Lys Leu Tyr Ala Val Glu Ile Ser Asp			
122	355	360	365	
123	His Pro Gly Glu His Glu Val Gly Glu Pro Glu Phe His Tyr Ile Ala			
124	370	375	380	
125	Gly Ala His Gly Asn Glu Val Leu Gly Arg Glu Leu Leu Leu Leu			
126	385	390	395	400
127	Leu His Phe Leu Cys Gln Glu Tyr Ser Ala Gln Asn Ala Arg Ile Val			
128	405	410	415	
129	Arg Leu Val Glu Glu Thr Arg Ile His Ile Leu Pro Ser Leu Asn Pro			
130	420	425	430	
131	Asp Gly Tyr Glu Lys Ala Tyr Glu Gly Ser Glu Leu Gly Gly Trp			
132	435	440	445	
133	Ser Leu Gly Arg Trp Thr His Asp Gly Ile Asp Ile Asn Asn Asn Phe			
134	450	455	460	
135	Pro Asp Leu Asn Ser Leu Leu Trp Glu Ala Glu Asp Gln Gln Asn Ala			
136	465	470	475	480
137	Pro Arg Lys Val Pro Asn His Tyr Ile Ala Ile Pro Glu Trp Phe Leu			
138	485	490	495	
139	Ser Glu Asn Ala Thr Val Ala Thr Glu Thr Arg Ala Val Ile Ala Trp			
140	500	505	510	
141	Met Glu Lys Ile Pro Phe Val Leu Gly Gly Asn Leu Gln Gly Glu			
142	515	520	525	
143	Leu Val Val Ala Tyr Pro Tyr Asp Met Val Arg Ser Leu Trp Lys Thr			
144	530	535	540	
145	Gln Glu His Thr Pro Thr Pro Asp Asp His Val Phe Arg Trp Leu Ala			
146	545	550	555	560
147	Tyr Ser Tyr Ala Ser Thr His Arg Leu Met Thr Asp Ala Arg Arg Arg			
148	565	570	575	
149	Val Cys His Thr Glu Asp Phe Gln Lys Glu Glu Gly Thr Val Asn Gly			
150	580	585	590	
151	Ala Ser Trp His Thr Val Ala Gly Ser Leu Asn Asp Phe Ser Tyr Leu			
152	595	600	605	
153	His Thr Asn Cys Phe Glu Leu Ser Ile Tyr Val Gly Cys Asp Lys Tyr			
154	610	615	620	

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/900,518A

DATE: 05/31/2002  
TIME: 14:04:00

Input Set : A:\PTOMS.txt  
Output Set: N:\CRF3\05312002\I900518A.raw

155 Pro His Glu Ser Glu Leu Pro Glu Glu Trp Glu Asn Asn Arg Glu Ser  
156 625 630 635 640  
157 Leu Ile Val Phe Met Glu Gln Val His Arg Gly Ile Lys Gly Ile Val  
158 645 650 655  
159 Arg Asp Leu Gln Gly Lys Gly Ile Ser Asn Ala Val Ile Ser Val Glu  
160 660 665 670  
161 Gly Val Asn His Asp Ile Arg Thr Ala Ser Asp Gly Asp Tyr Trp Arg  
162 675 680 685  
163 Leu Leu Asn Pro Gly Glu Tyr Val Val Thr Ala Lys Ala Glu Gly Phe  
164 690 695 700  
165 Ile Thr Ser Thr Lys Asn Cys Met Val Gly Tyr Asp Met Gly Ala Thr  
166 705 710 715 720  
167 Arg Cys Asp Phe Thr Leu Thr Lys Thr Asn Leu Ala Arg Ile Arg Glu  
168 725 730 735  
169 Ile Met Glu Thr Phe Gly Lys Gln Pro Val Ser Leu Pro Ser Arg Arg  
170 740 745 750  
171 Leu Lys Leu Arg Gly Arg Lys Arg Arg Gln Arg Gly  
172 755 760  
175 <210> SEQ ID NO: 3  
176 <211> LENGTH: 200  
177 <212> TYPE: DNA  
178 <213> ORGANISM: Artificial Sequence  
180 <220> FEATURE:  
181 <223> OTHER INFORMATION: Targeting Vector  
183 <400> SEQUENCE: 3  
184 ggcatggccc gtctggggac cgcctgcct ggcgtggcgc tggccctggc acttgtggcg 60  
185 gtggccctgg ctggagtcag agcccagggc gcagccctcg aggagcctga ctattacagc 120  
186 caggagctct ggccgcgcgg ggcgtattat gggcatccgg agcctgagcc ggagccggag 180  
187 ctcttctcgca ttcaatgca 200  
189 <210> SEQ ID NO: 4  
190 <211> LENGTH: 200  
191 <212> TYPE: DNA  
192 <213> ORGANISM: Artificial Sequence  
194 <220> FEATURE:  
195 <223> OTHER INFORMATION: Targeting Vector  
197 <400> SEQUENCE: 4  
198 gagggagaag ttagttgcag agacgcctcc accaggtaac ttttgcacg ggcagcccg 60  
199 gggggcgcaca gcgatgtgg cactccaggg gacacctggc ttccagtatg ttttctttag 120  
200 tgagcccagc caaagtctg tgggcctgt gttattccct agagactaca tctgagctaa 180  
201 gttcagcttt ctctccctgc 200

VERIFICATION SUMMARY DATE: 05/31/2002  
PATENT APPLICATION: US/09/900,518A TIME: 14:04:01

Input Set : A:\PTOMS.txt  
Output Set: N:\CRF3\05312002\I900518A.raw

Does Not Comply  
Corrected Diskette Needed



OIPE

RAW SEQUENCE LISTING

DATE: 05/23/2002

PATENT APPLICATION: US/09/900,518A

TIME: 17:47:37

Input Set : A:\R-716 sequence listing for submission.txt  
Output Set: N:\CRF3\05232002\I900518A.raw

4 <110> APPLICANT: Allen, Keith D.  
5 Zhang, Qin  
7 <120> TITLE OF INVENTION: TRANSGENIC MICE CONTAINING CX2 GENE  
8 DISRUPTIONS  
10 <130> FILE REFERENCE: R-716  
12 <140> CURRENT APPLICATION NUMBER: US 09/900,518A  
13 <141> CURRENT FILING DATE: 2001-07-06  
15 <150> PRIOR APPLICATION NUMBER: US 60/216,178  
16 <151> PRIOR FILING DATE: 2000-07-06  
18 <160> NUMBER OF SEQ ID NOS: 4  
20 <170> SOFTWARE: FastSEQ for Windows Version 4.0

## ERRORED SEQUENCES

189 <210> SEQ ID NO: 4  
190 <211> LENGTH: 200  
191 <212> TYPE: DNA  
192 <213> ORGANISM: Artificial Sequence  
194 <220> FEATURE:  
195 <223> OTHER INFORMATION: Targeting Vector  
197 <400> SEQUENCE: 4  
198 gagggagaag ttatggcag agacgcctcc accaggtaac ttttgcatacg ggcagcccgaa 60  
199 gggggcgcca gcgatcgatgg cactccagg gacacctggc ttccagttatg ttttctttag 120  
200 ttagcccgac caaagtccctg tggtgccctgt gttattccct agagactaca tctgagctaa 180  
201 gttcagcttt ctctccctgc 200

E--&gt; 205 1

remove extra material from end  
of file

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/900,518A

DATE: 05/23/2002

TIME: 17:47:38

Input Set : A:\R-716 sequence listing for submission.txt  
Output Set: N:\CRF3\05232002\I900518A.raw

L:205 M:254 E: No. of Bases conflict, this line has no nucleotides.